



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,010	09/29/2003	Douglas A. Hughes	EAT 0201 PUS/00-rTRN-168	2393
7590	12/13/2004		EXAMINER LEWIS, TISHA D	
Kevin J. Heint Brooks Kushman P.C. 22nd Floor 1000 Town Center Southfield, MI 48075-1238			ART UNIT 3681	PAPER NUMBER
DATE MAILED: 12/13/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,010

Applicant(s)

HUGHES ET AL.

Examiner

TISHA D. LEWIS

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14, 18-22 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 9-13, 15-17, 23-25 and 29-31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

The following is a first action on the merits of application serial no. 10/674,010 filed on September 29, 2003.

Information Disclosure Statement

The information disclosure statement filed on September 29, 2003 has been acknowledged.

Claim Objections

Claim 18 is objected to because of the following informalities:

-in line 5, before "overspeed", "an" should be changed to --the--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14, 21, 22 and 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 14 and 26-28, the limitation "the/a gear overspeed test" is indefinite because it is unclear as to if this overspeed is the same as the engine overspeed, please clarify.

Claim 21 recites the limitation "the method" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 3681

Claim 22 recites the limitation "the at least two possible range states" in line 5.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al ('473) in view of Hutchison ('698). As to claims 1-4, Mason et al discloses a manually shifted transmission having intent to shift detection (46), determining potential target gear ratios (1-10), verifying the target gear ratio, determining an appropriate range state (high or low) and controlling shifting to the range state (90) according to the target gear.

Mason et al does not disclose verifying the target gear ratio by having an engine overspeed test.

Hutchinson discloses a manually shifted transmission having an input shaft overspeed warning wherein after a detection for an intent to shift, the target gear ratio is determined and a logic controller compares the current input shaft speed to a maximum or minimum engine speed reference value (corresponding to engine overspeed test) and also does not shift to target gear ratio if vehicle speed is above a reference speed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Mason et al with an engine overspeed evaluation to

Art Unit: 3681

determine appropriate gear ratios and range states in view of Hutchinson to avoid increasing engine speed beyond an unacceptable rate which may destroy engine performance.

As to claims 5 and 6, Mason et al discloses a shift knob force detection (57, 58), a shift lever rail detection (via 70), a splitter switch detection (via 90) and determining the target gear positions via these detections.

As to claims 7 and 8, Mason et al discloses a manually shifted transmission having intent to shift detection (46), determining potential target gear ratios (1-10), verifying the target gear ratio, determining an appropriate range state (high or low), controlling shifting to the range state (90) according to the target gear and a shift knob force detection (57, 58), a shift lever rail detection (via 70), a splitter switch detection (via 90), a vehicle speed detection (OS) and determining the target gear positions via these detections.

Mason et al does not disclose verifying the target gear ratio by having an engine overspeed test.

Hutchinson discloses a manually shifted transmission having an input shaft overspeed warning wherein after a detection for an intent to shift, the target gear ratio is determined and a logic controller compares the current input shaft speed to a maximum or minimum engine speed reference value (corresponding to engine overspeed test) and also does not shift to target gear ratio if vehicle speed is above a reference speed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Mason et al with an engine overspeed evaluation to

Art Unit: 3681

determine appropriate gear ratios and range states in view of Hutchinson to avoid increasing engine speed beyond an unacceptable rate which may destroy engine performance.

As to claims 18-22, Mason et al discloses a manually shifted transmission having a shift lever (42), position sensor (46), force detector for shift force on lever (57, 58), splitter switch (90) toggle between high and low ratio, speed sensor (32) for an engine, control logic (52) for receiving these signals and outputting to system actuators (via 56) and a range shift mechanism (via 70) for shifting between a high or low rail.

Mason et al does not disclose verifying the target gear ratio by having an engine overspeed test.

Hutchinson discloses a manually shifted transmission having an input shaft overspeed warning wherein after a detection for an intent to shift, the target gear ratio is determined and a logic controller compares the current input shaft speed to a maximum or minimum engine speed reference value (corresponding to engine overspeed test) and also does not shift to target gear ratio if vehicle speed is above a reference speed.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Mason et al with an engine overspeed evaluation to determine appropriate gear ratios and range states in view of Hutchinson to avoid increasing engine speed beyond an unacceptable rate which may destroy engine performance.

Art Unit: 3681

Allowable Subject Matter

Claims 9-13, 15-17, 23-25 and 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 14 and 26-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to
the Patent and Trademark Office (Fax No. (703) 000-0000) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by

Art Unit: 3681

the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Iizuka ('797) and ('277), Redzinski ('842) and Kuras ('628).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 703-305-0921. The examiner can normally be reached on M-Thur 8 AM TO 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/674,010

Page 8

Art Unit: 3681

Tdl

December 10, 2004

Tisha Lewis
TISHA LEWIS
PRIMARY EXAMINER
Au 3681 12/10/04